

# Rittal – The System.

Faster – better – worldwide.

## Energy efficiency by design



Industrial enclosures

Power distribution

System climate control

FRIEDHELM LOH GROUP





# All from a single partner

## for maximum energy efficiency

Only those who use energy efficiently will be successful in the long run. Whether in energy distribution, automation, building services or IT infrastructure – there is savings potential waiting to be uncovered in every corner of a company. But it will likely go unnoticed without close scrutiny of the overarching processes and correlations. Rittal offers integrated solutions with tangible savings potential, from analysis and planning through to implementation. All from a single source. That is what we mean by **Rittal – The System**.

**Maximum energy efficiency demands an integrated approach, giving due consideration to ...**

**... efficient components**



### IT infrastructure

Intelligent coordination, e.g. between servers and the capacities of UPS and climate cooling, enhances both energy efficiency and productivity.

Innovative, energy-efficient climate control and UPS concepts require:

- Dimensioning in accordance with precise limit value specifications
- Exact, demand-based control
- Efficient redundancy
- Preventive monitoring and control

**... perfectly dimensioned systems**



### Production infrastructure

Effective cooling, despite fluctuating ambient temperatures and variable heat losses, demands targeted interaction of the following components:

- Climate control systems
- Enclosure configuration
- Intelligent controllers

To maximise energy efficiency, we integrate not only enclosure climate control, but also machine and process cooling:

- Liquid cooling
- Central recooling
- Heat recovery

**... optimised technologies**



### Building services

The heat losses from data centres and manufacturing facilities are a valuable source of energy for the building infrastructure.

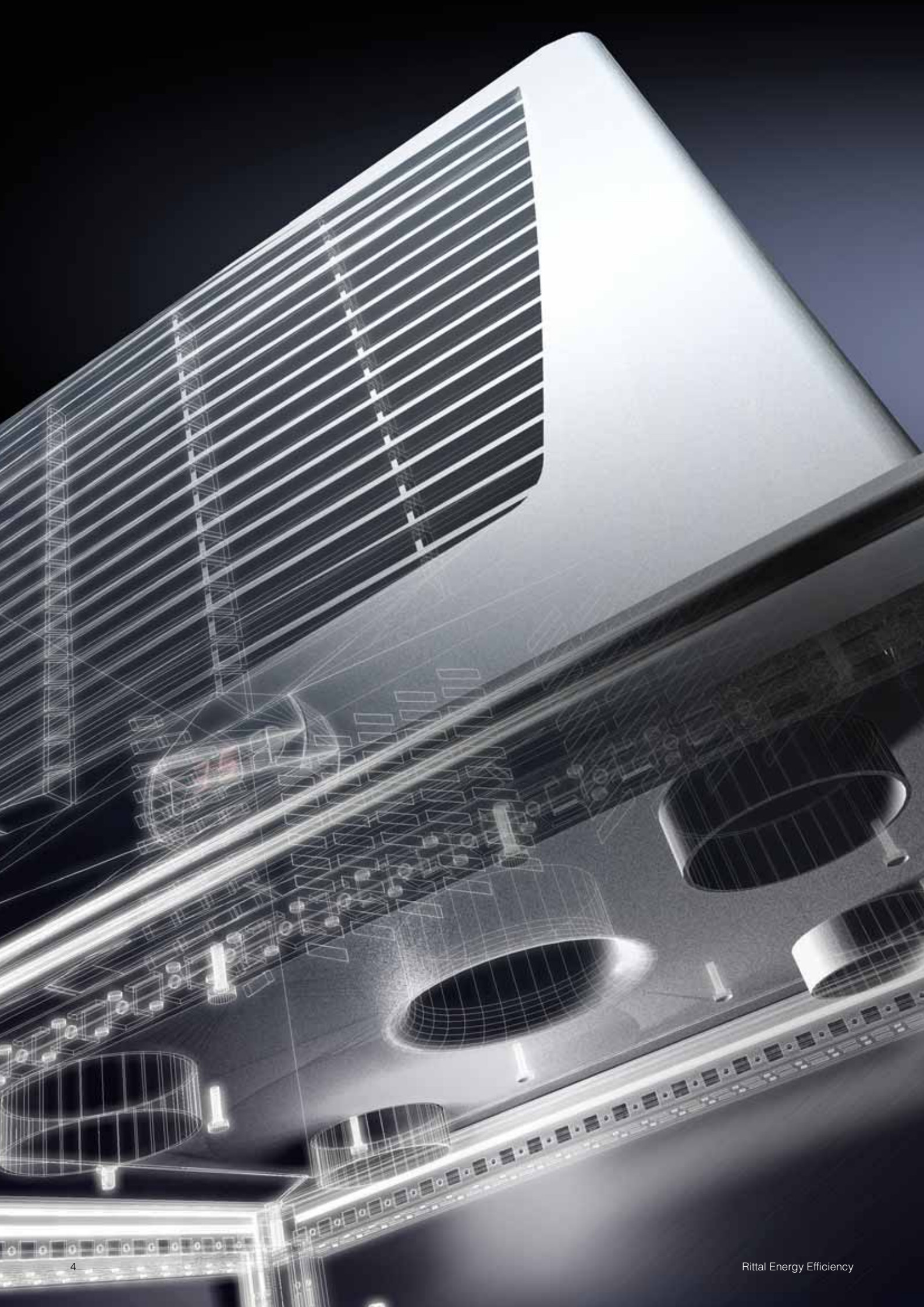
Heat recovery for:

- Hot water
- Heating for production halls, offices and residential floors
- Process heat

Intelligent energy recycling in the most varied areas of your company is the real key to energy efficiency.

## Products + Engineering + Realisation = All from a single partner

- We offer you energy-saving products and systems.
- We monitor overall performance with comprehensive software tools.
- We take care of the whole "energy efficiency chain" (1. Analysis, 2. Planning, 3. Implementation).

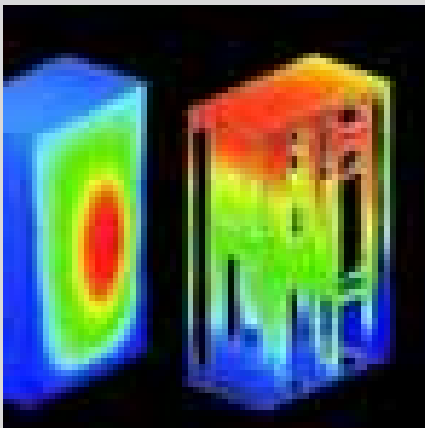


# Full service made to measure for maximum energy efficiency

Savings potential is often hidden in the detail. And that is precisely the starting point for Rittal's made-to-measure service.

On the road to a tailored solution, we analyse the energy consumption of your whole building infrastructure, determine the relevant interdependencies, and show you how intelligent energy use can achieve a sustainable efficiency gain. Special software tools support optimisation processes in every phase; from testing, via visualisation and simulation, through to development, monitoring and administration. The sophisticated and successful implementation of efficient solutions. That, too, is what we mean by **Rittal – The System**.

**It takes insight and comprehensive understanding to optimise complex company processes. Modern software brings details to the surface and facilitates planning. Our offer of services to you:**



## Comprehensive analysis

“Energy wasters”, such as over-dimensioned cooling systems, inappropriately configured controllers, contaminated components and inefficient UPS systems, are to be found lurking everywhere.

We track down your savings potential.

- Systematic and time-based analyses
- Thermography
- CFD analysis

## Efficiency planning

The results of analysis are incorporated into an optimisation concept elaborated together with your own specialists. The outcome:

- A plan of action with transparent cost-benefit analysis
- Guaranteed faster ROI
- Financial savings
- Improved availability of IT systems and production machinery

Special Rittal planning software: Rittal Therm, RICAD 3D, Calculation Manager.

## Integrated implementation

Rittal merges the appropriate modules into a convincing whole. That provides for tailored products building upon the know-how of our experts.

- Commissioning and efficiency review
- System monitoring
- Support services
- Software tool for availability and efficiency management: RiZone (also in combination with Microsoft SCOM)

## Faster, better, worldwide: Solutions made to measure

**Faster:** Fewer interfaces, faster processes, integrated approach and technology consistency for maximum efficiency

**Better:** For example, up to 50% energy savings with Rittal IT Cooling

**Worldwide:** IT and production infrastructures



# Outstanding products

## for maximum energy efficiency

Rittal offers you highly efficient components and system solutions, guaranteeing perfect interaction between all areas of your IT and production infrastructure.

The Rittal technologies can best play out their strengths where avoidable energy losses have been eliminated in advance through monitoring, flexible adaptation and preventive measures.

A permanent process, for which Rittal has also developed the necessary measurement and management techniques. The result: Maximum energy efficiency. Comprehensive – from concept to solution.

### Rittal – The System.

**Energy efficiency – that is the outcome of intelligent process integration. With the right products at the critical points, EFFICIENCY stands out “in capital letters”. Rittal has those products! Three examples:**



#### Cool Efficiency and Thermoelectric Cooler

In autonomous use, Rittal cooling units are masters of maximum efficiency for rack and enclosure climate control.

- Up to 45% energy savings for the same cooling capacity
- Money in your pocket and good for the environment

This efficiency can be enhanced further still by intelligent, demand-based control and targeting routing of the air to the important hot spots.



#### Complete liquid cooling solutions

Energy savings in IT and production with products featuring exemplary energy efficiency and intelligent control.

- Recooling systems for IT and production, free cooling
- CRAC systems, cold aisle containment
- Air-water heat exchangers, cold plates
- High-density cooling
- Piping systems
- Monitoring



#### Rittal UPS system Power Modular Concept

Minimal space requirements, simple expansion and maintenance without interrupting operation, and particular energy efficiency – those are the features by which Rittal PMC systems stand out.

- High efficiency (PMC 40: 22% increase = 30% reduction in heat losses)
- Modular redundancy (n+1)
- Precise adaptation to the actual demand (modular scalability)



The Rittal Thermoelectric Cooler was voted the best innovation in the category “Industry”.

# Rittal – The System.

**Faster – better – worldwide.**

Maximum efficiency, reduced costs, energy savings. Rittal's strategy says think in terms of system solutions and provide a system for all applications – from power distribution and automation, to building installation, through to the IT infrastructure.

And offer your customers unprecedented benefits.

- Industrial enclosures
- Power distribution
- Electronic packaging
- System climate control
- IT systems
- Service



05/10 · E50C